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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,056	06/01/2001	Samuel Moon-Ho Song	1403	4013

7590

06/16/2004

Chung K. Ko
1263 Lakeside Drive, #2190
Sunnyvale, CA 94085

EXAMINER

TABATABAI, ABOLFAZL

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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JUN 29 2004

Technology Center 2600

Office Action Summary	Application No. 09/873,056	Applicant(s) SONG, SAMUEL MOON-HO	
	Examiner Abolfazl Tabatabai	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-83 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 61-83 is/are allowed.
6) ☐ Claim(s) 1, 7-19, 22-37 and 40-60 is/are rejected.
7) ☒ Claim(s) 2-6, 20, 21, 38 and 39 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 06 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because the abstract should be in narrative form and generally limited to a " single paragraph" on a separate sheet.

Correction is required. See MPEP § 608.01(b).

Claim Objections

2. Claim 30 is objected to because of the following informalities: In claim 30, line 1 the word " steam " should be corrected as " stream ".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1,7, 8, 13, 15-18, 22, 36, 37, 40, 41, 46, 47, 48, 49, 54, 57 and 60 are rejected under 35 U.S.C. 102(e) as being anticipated by Richards (U S 6,477,267 B1).

Regarding claim 1, Richards discloses image conversion and encoding techniques comprising the steps of:

capturing the images of the object as a sequence of images (column 4, lines 1-6, and column 8, lines 12-19);

encoding the sequence of images as video having video frames (column 12, lines 46-49 and column 14, lines 33-51); and,

viewing the object in 3-D by random access of the video (column 8, lines 12-19).

Regarding claim 7, Richards discloses image conversion and encoding techniques wherein the video is streamed so that the viewing can start as soon as one or more frames have been received (column 8, lines 12-19).

Regarding claim 8, Richards discloses image conversion and encoding techniques wherein the step of encoding includes the step of compressing the video (column 10, lines 3-5 and column 13, lines 15-22).

Regarding claim 13, Richards discloses image conversion and encoding techniques wherein the step of viewing includes the step of pre-decoding the video for real-time display (column 2, lines 35-39).

Regarding claim 15, Richards discloses image conversion and encoding techniques wherein the step of viewing the object includes the step of streaming the most important frames first (column 12, lines 61-65).

Regarding claim 16, Richards discloses image conversion and encoding techniques further including the step of editing the captured images before encoding (column 9, lines 3-6 and column 13, lines 31-55).

Regarding claim 17, Richards discloses image conversion and encoding techniques further comprising the step of manipulating the object while viewing the object (column 8, lines 22-32 and column 9, 3-6).

Regarding claim 18, Richards discloses image conversion and encoding techniques the step of manipulating includes the step of rotating the object (column 8, lines 12-19).

Regarding claim 22, Richards discloses image conversion and encoding techniques further comprising the step of storing the image sequence in a database (column 9, lines 7-12 and column 10, lines 29-37).

Claim 36, is similarly analyzed as claim 1 above.

Regarding claim 37, Richards discloses image conversion and encoding techniques wherein the image capture device includes a camera (column 8, lines 26-30).

Claim 40, is similarly analyzed as claim 7 above.

Claim 41, is similarly analyzed as claim 8 above.

Claim 46, is similarly analyzed as claim 13 above.

Claim 47, is similarly analyzed as claim 16 above.

Claim 48, is similarly analyzed as claim 17 above.

Claim 49, is similarly analyzed as claim 22 above.

Regarding claim 54, Richards discloses image conversion and encoding techniques comprising the steps of:

capturing the images of the object as a sequence of images (column 4, lines 1-6 and column 8, lines 12-19);

encoding the sequence of images as video having video frames (column 12, lines 46-49 and column 14, lines 33-51);

storing the video in a database (column 9, lines 7-13);

viewing the object in 3-D through random access of the video (column 8, lines 12-19); and,

manipulating the object in 3-D (column 8, lines 22-32 and column 9, lines 3-6).

Claim 57, is similarly analyzed as claim 54 above.

Regarding claim 60, Richards discloses image conversion and encoding techniques further comprising the steps of: receiving the video by a user (column 5, lines 57-67); viewing the object in 3-D through random access of the received video 9column 8, lines 12-19); and, manipulating the object in 3-D 9column 8, lines 22-32 and column 9, lines 3-6).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 9-12, 14, 19, 42, 43-45, 55 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richards (U S 6,477,267 B1) in view of Wee et al (U S 6,507,618 B1).

Regarding claim 9, Richards is silent about the specific details regarding the step of compressing uses MPEG.

In the same field (compressed video) of endeavor, however, Wee discloses compressed video signal including independently coded regions comprising the step of compressing uses MPEG (column 7, lines 2-16 and column 12, lines 59-61).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use MPEG as taught by Wee in the system of Richards because Wee provides an improved signal processing and more particularly provides a compression system that utilizes independently coded regions to permit select extraction of image objects, or editing of select areas of an image frame, without necessarily decompressing all image data in each frame.

Regarding claim 10, Richards is silent about the specific details regarding the step of compressing uses H.261.

In the same field (compressed video) of endeavor, however, Wee discloses compressed video signal including independently coded regions comprising the step of compressing uses MPEG (column 7, lines 2-16 and column 12, lines 59-61).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use MPEG as taught by Wee in the system of Richards because Wee provides an improved signal processing and more particularly provides a

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compression system that utilizes independently coded regions to permit select extraction of image objects, or editing of select areas of an image frame, without necessarily decompressing all image data in each frame.

Regarding claim 11, Richards is silent about the specific details regarding the step of compressing uses H.263.

In the same field (compressed video) of endeavor, however, Wee discloses compressed video signal including independently coded regions comprising the step of compressing uses H.263 (column 7, lines 45-52).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use H.263 as taught by Wee in the system of Richards because Wee provides an improved signal processing and more particularly provides a compression system that utilizes independently coded regions to permit select extraction of image objects, or editing of select areas of an image frame, without necessarily decompressing all image data in each frame.

Regarding claim 12, Richards is silent about the specific details regarding the step of compressing uses H.263+.

In the same field (compressed video) of endeavor, however, Wee discloses compressed video signal including independently coded regions comprising the step of compressing uses H.263+ (column 7, lines 45-52).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use H.263+ as taught by Wee in the system of Richards because Wee provides an improved signal processing and more particularly provides a

compression system that utilizes independently coded regions to permit select extraction of image objects, or editing of select areas of an image frame, without necessarily decompressing all image data in each frame.

Regarding claim 14, Richards is silent about the specific details regarding the video is compressed using MPEG and the step of viewing the object includes the step of streaming I frames followed by P frames followed by B frames.

In the same field (compressed video) of endeavor, however, Wee discloses compressed video signal including independently coded regions comprising the step of streaming I frames followed by P frames followed by B frames (column 12, lines 50-61 and column 19, lines 6-19).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use streaming I frames followed by P frames followed by B frames as taught by Wee in the system of Richards because Wee provides an improved signal processing and more particularly provides a compression system that utilizes independently coded regions to permit select extraction of image objects, or editing of select areas of an image frame, without necessarily decompressing all image data in each frame.

Regarding claim 19, Richards is silent about the specific details regarding the step of manipulating includes the step of zooming the object.

In the same field (compressed video) of endeavor, however, Wee discloses compressed video signal including independently coded regions comprising the step of

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manipulating includes the step of zooming the object (fig. 4 element 213 and column 14, lines 16-26).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use zooming the object as taught by Wee in the system of Richards because Wee provides an improved signal processing and more particularly provides a compression system that utilizes independently coded regions to permit select extraction of image objects, or editing of select areas of an image frame, without necessarily decompressing all image data in each frame.

Claim 42, is similarly analyzed as claim 9 above.

Claim 43, is similarly analyzed as claim 10 above.

Claim 44, is similarly analyzed as claim 11 above.

Regarding claim 45, Richards is silent about the specific details regarding the step of the viewer includes a look-up-table (LUT) for mapping the view angle to a frame number.

In the same field (compressed video) of endeavor, however, Wee discloses compressed video signal including independently coded regions comprising the step of the viewer includes a look-up-table (LUT) for mapping the view angle to a frame number (column 15, lines 36-44).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use look-up table as taught by Wee in the system of Richards because Wee provides an improved signal processing and more particularly provides a compression system that utilizes independently coded regions to permit select

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extraction of image objects, or editing of select areas of an image frame, without necessarily decompressing all image data in each frame.

Claim 55, is similarly analyzed as claim 9 above.

Claim 58, is similarly analyzed as claim 9 above.

7. Claims 23-35, 5-53, 56 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richards (U S 6,477,267 B1) in view of Sarkar (U S 6,012,067).

Regarding claim 23, Richards is silent about the specific details regarding the step of the database is a centralized database.

In the same field (computer system) of endeavor, however, Sarkar discloses a system for sorting and manipulating objects in plurality of relational data comprising the step of the database is a centralized database (column 11, lines 22-25).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use centralized database as taught by Wee in the system of Richards because Sarkar provides database systems for storing and manipulating any kind of data on internet. With the advancement of internet and W.W.W, a large number of different types of objects such a video, audio, image as well as relational data are being created every day. Additionally, database transactions over the web, internet commerce, security and distributed many tier applications architecture are also posing demand for new technology solutions. This system relates to these specific technology needs.

Regarding claim 24, Richards is silent about the specific details regarding the step of the database is a distributed database.

In the same field (computer system) of endeavor, however, Sarkar discloses a system for sorting and manipulating objects in plurality of relational data comprising the step of the database is a distributed database (column 5, lines 23-27).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use distributed database as taught by Wee in the system of Richards because Sarkar provides database systems for storing and manipulating any kind of data on internet. With the advancement of internet and W.W.W, a large number of different types of objects such a video, audio, image as well as relational data are being created every day. Additionally, database transactions over the web, internet commerce, security and distributed many tier applications architecture are also posing demand for new technology solutions. This system relates to these specific technology needs.

Regarding claim 25, Richards is silent about the specific details regarding the step of the database is accessed through a network.

In the same field (computer system) of endeavor, however, Sarkar discloses a system for sorting and manipulating objects in plurality of relational data comprising the step of the database is accessed through a network (column 8, lines 39-44).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use database is accessed through a network as taught by Wee in the system of Richards because Sarkar provides database systems for storing and manipulating any kind of data on internet. With the advancement of internet and W.W.W, a large number of different types of objects such a video, audio, image as well

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as relational data are being created every day. Additionally, database transactions over the web, internet commerce, security and distributed many tier applications architecture are also posing demand for new technology solutions. This system relates to these specific technology needs.

Regarding claim 26, Richards is silent about the specific details regarding the step of the network is the Internet.

In the same field (computer system) of endeavor, however, Sarkar discloses a system for sorting and manipulating objects in plurality of relational data comprising the step of the network is the Internet (column 11, lines 18-25).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the network is the Internet as taught by Wee in the system of Richards because Sarkar provides database systems for storing and manipulating any kind of data on internet. With the advancement of internet and W.W.W, a large number of different types of objects such a video, audio, image as well as relational data are being created every day. Additionally, database transactions over the web, internet commerce, security and distributed many tier applications architecture are also posing demand for new technology solutions. This system relates to these specific technology needs.

Regarding claim 27, Richards is silent about the specific details regarding the step of publishing the URL corresponding to the location of the image sequence within the database.

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In the same field (computer system) of endeavor, however, Sarkar discloses a system for sorting and manipulating objects in plurality of relational data comprising the step of publishing the URL corresponding to the location of the image sequence within the database (column 8, lines 39-44).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use URL as taught by Wee in the system of Richards because Sarkar provides database systems for storing and manipulating any kind of data on internet. With the advancement of internet and W.W.W, a large number of different types of objects such a video, audio, image as well as relational data are being created every day. Additionally, database transactions over the web, internet commerce, security and distributed many tier applications architecture are also posing demand for new technology solutions. This system relates to these specific technology needs

Regarding claim 28, Richards is silent about the specific details regarding the step of the URL is password protected.

In the same field (computer system) of endeavor, however, Sarkar discloses a system for sorting and manipulating objects in plurality of relational data comprising the step of the URL is password protected (column 11, lines 18-25).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use of the URL is password protected as taught by Wee in the system of Richards because Sarkar provides database systems for storing and manipulating any kind of data on internet. With the advancement of internet and W.W.W, a large number of different types of objects such a video, audio, image as well

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as relational data are being created every day. Additionally, database transactions over the web, internet commerce, security and distributed many tier applications architecture are also posing demand for new technology solutions. This system relates to these specific technology needs

Regarding claim 29, Richards is silent about the specific details regarding the step of the step of viewing including the step of downloading a separate multimedia stream.

In the same field (computer system) of endeavor, however, Sarkar discloses a system for sorting and manipulating objects in plurality of relational data comprising the step of the step of viewing including the step of downloading a separate multimedia stream (column 11, lines 8-11).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the downloading as taught by Wee in the system of Richards because Sarkar provides database systems for storing and manipulating any kind of data on internet. With the advancement of internet and W.W.W, a large number of different types of objects such a video, audio, image as well as relational data are being created every day. Additionally, database transactions over the web, internet commerce, security and distributed many tier applications architecture are also posing demand for new technology solutions. This system relates to these specific technology needs

Regarding claim 30, Richards is silent about the specific details regarding the step of the separate multimedia steam includes zoom data requested by the user.

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In the same field (computer system) of endeavor, however, Sarkar discloses a system for sorting and manipulating objects in plurality of relational data comprising the step of the step of the separate multimedia stream includes zoom data requested by the user (column 5, lines 49-57).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use zooming data as taught by Wee in the system of Richards because Sarkar provides database systems for storing and manipulating any kind of data on internet. With the advancement of internet and W.W.W, a large number of different types of objects such a video, audio, image as well as relational data are being created every day. Additionally, database transactions over the web, internet commerce, security and distributed many tier applications architecture are also posing demand for new technology solutions. This system relates to these specific technology needs.

Regarding claim 31, Richards discloses image conversion and encoding techniques wherein the separate multimedia stream includes other related data requested by the user (column 10, lines 60-63 and column 12, lines 61-65).

Regarding claim 32, Richards discloses image conversion and encoding techniques wherein the related data is video (column 10, lines 41-46).

Regarding claim 33, Richards discloses image conversion and encoding techniques wherein the related data is still images (column 8, lines 12-19).

Regarding claim 34, Richards discloses image conversion and encoding techniques wherein the related data is sound (column 13, lines 36-40).

Regarding claim 35, Richards discloses image conversion and encoding techniques wherein the related data is coordinates of points on the object(column 4, lines 1-7).

Claim 50, is similarly analyzed as claim 23 above.

Claim 51, is similarly analyzed as claim 24 above.

Claim 52, is similarly analyzed as claim 25 above.

Claim 53, is similarly analyzed as claim 26 above.

Claim 56, is similarly analyzed as claim 26 above.

Claim 59, is similarly analyzed as claim 26 above.

Allowable Subject Matter

8. Claims 2-6, 20, 21, 38, 39, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is an Examiner's statement of reasons for allowance.

The prior art of record fails to teach or suggest, obtaining a sequence of projected 2D images by projecting the 3D volume data at prescribed azimuth and elevation angles; encoding the sequence of projected 2D images wherein each images are tagged with azimuth and elevation angles in combination into other features and elements of claims 61, 74 and 78.

10. **Claims 61-83 are allowed.**

Other Prior Art Cited

11. The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Adler et al (U S 6,028,907) disclose system and method for three-dimensional geometric modeling by extracting and merging two-dimensional contours from CT slice data and CT scout data.

Hossack et al (U S 6,511,426) disclose medical diagnostic ultrasound system and method for versatile processing.

Abato et al (U. S. 6,513,069 B1) disclose enhanced video programming system and method for providing a distributed community network.

Contact Information

12. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to ABOLFAZL TABATABAI whose telephone number is (703) 306-5917.

The Examiner can normally be reached on Monday through Friday from 9:30 a.m. to 7:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Mehta Bhavesh M, can be reached at (703) 308-5246. The fax phone number for organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abolfazl Tabatabai

Patent Examiner

Group Art Unit 2625

June 12, 2004



**BHAVESH M. MEHTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**

Notice of References Cited	Application/Control No. 09/873,056	Applicant(s)/Patent Under Reexamination SONG, SAMUEL MOON-HO	
	Examiner Abolfazl Tabatabai	Art Unit 2625	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,477,267 B1	11-2002	Richards, Angus Duncan	382/154
	B	US-6,012,067	01-2000	Sarkar, Shyam Sundar	707/103R
	C	US-6,028,907	02-2000	Adler et al.	378/4
	D	US-6,511,426 B1	01-2003	Hossack et al.	600/437
	E	US-6,513,069 B1	01-2003	Abato et al.	709/238
	F	US-6,507,618 B1	01-2003	Wee et al.	375/240.16
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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